Product datasheet

Anti-Vimentin antibody ab137321

29 References  14 Images

Overview

Product name  Anti-Vimentin antibody
Description  Rabbit polyclonal to Vimentin
Host species  Rabbit
Tested applications  Suitable for: WB, ICC/IF, IHC-P, IP
Species reactivity  Reacts with: Mouse, Rat, Human
                  Predicted to work with: Chicken, Guinea pig, Cow, Dog, Chimpanzee
Immunogen  Recombinant fragment within Human Vimentin (internal sequence). The exact sequence is proprietary.
            Database link: P08670

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C.
            Avoid freeze / thaw cycle.
Storage buffer  pH: 7.00
            Preservative: 0.01% Thimerosal (merthiolate)
            Constituents: 20% Glycerol, 1% BSA, PBS
Purity  Affinity purified
Clonality  Polyclonal
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab137321 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
Vimentins are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is attached to the nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally. Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2.

Tissue specificity
Highly expressed in fibroblasts, some expression in T- and B-lymphocytes, and little or no expression in Burkitt's lymphoma cell lines. Expressed in many hormone-independent mammary carcinoma cell lines.

Involvement in disease
Cataract 30

Sequence similarities
Belongs to the intermediate filament family.

Domain
The central alpha-helical coiled-coil rod region mediates elementary homodimerization. The [IL]-x-C-x-x-[DE] motif is a proposed target motif for cysteine S-nitrosylation mediated by the iNOS-S100A8/A9 transnitrosylase complex.

Post-translational modifications
Filament disassembly during mitosis is promoted by phosphorylation at Ser-55 as well as by nestin (By similarity). One of the most prominent phosphoproteins in various cells of mesenchymal origin. Phosphorylation is enhanced during cell division, at which time vimentin filaments are significantly reorganized. Phosphorylation by PKN1 inhibits the formation of filaments. Phosphorylated at Ser-56 by CDK5 during neutrophil secretion in the cytoplasm. Phosphorylated by STK33. O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status. S-nitrosylation is induced by interferon-gamma and oxidatively-modified low-density lipoprotein (LDL(ox)) possibly implicating the iNOS-S100A8/9 transnitrosylase complex.

Cellular localization
Cytoplasm.

Form
Vimentin is found in connective tissue and in the cytoskeleton.

Images

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/500 - 1/3000. Predicted molecular weight: 54 kDa.</td>
<td></td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/100 - 1/1000.</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/100 - 1/1000.</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>Use at an assay dependent concentration.</td>
<td></td>
</tr>
</tbody>
</table>
**Western blot - Anti-Vimentin antibody (ab137321)**

**All lanes**: Anti-Vimentin antibody (ab137321) at 1/50000 dilution

*Lane 1*: U87-MG (Human glioblastoma-astrocytoma epithelial cell line) whole cell extracts

*Lane 2*: SK-N-SH (Human neuroblastoma cell line) whole cell extracts

*Lane 3*: IMR32 whole cell extracts

*Lane 4*: SK-N-AS whole cell extracts

Lysates/proteins at 30 µg per lane.

**Secondary**

**All lanes**: HRP-conjugated anti-rabbit IgG

**Predicted band size**: 54 kDa

10% SDS-PAGE gel

Paraffin-embedded adult mouse retina tissue stained for Vimentin with ab137321 (1/250 dilution) (green) in immunohistochemical analysis.


Blue: Fluoroshield with DAPI.
Paraffin-embedded rat testis tissue stained for Vimentin with ab137321 at a 1/500 dilution in immunohistochemical analysis.

Paraffin-embedded mouse testis tissue stained for Vimentin with ab137321 at a 1/500 dilution in immunohistochemical analysis.
Paraffin-embedded mouse ovary tissue stained for Vimentin with ab137321 at a 1/500 dilution in immunohistochemical analysis.

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for Vimentin (green) using ab137321 (1/500 dilution) in ICC/IF. Cells were fixed in 4% paraformaldehyde at RT for 15 minutes. Counterstain: Hoechst 33342 (blue).

Vimentin was immunoprecipitated from HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell extracts using 5 µg of ab137321.

**Lane 1:** HeLa whole cell extracts (Input).

**Lane 2:** Control IgG in HeLa whole cell extracts.

**Lane 3:** Vimentin IP in HeLa whole cell extracts.
Paraffin-embedded human lung carcinoma tissue stained for Vimentin with ab137321 at a 1/500 dilution in immunohistochemical analysis.

Immunohistochemical analysis of paraffin-embedded, formalin-fixed RT2 rat xenograft tissue labeling Vimentin, using ab137321 at a 1/500 dilution.
Western blot - Anti-Vimentin antibody (ab137321) at 1/3000 dilution + HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 30 µg

**Predicted band size:** 54 kDa

7.5% SDS PAGE

Confocal immunofluorescence analysis of methanol-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Vimentin, using ab137321 (green) at a 1/500 dilution. Alpha-tubulin filaments were labelled with an anti-alpha tubulin antibody (red) at a 1/2000 dilution.
Western blot - Anti-Vimentin antibody (ab137321)

**All lanes**: Anti-Vimentin antibody (ab137321) at 1/3000 dilution

**Lane 1**: HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 20 µg

**Lane 2**: HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 10 µg

**Lane 3**: HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 5 µg

**Predicted band size**: 54 kDa

10% SDS PAGE

Anti-Vimentin antibody (ab137321) at 1/1000 dilution + NIH-3T3 (Mouse embryo fibroblast cell line) whole cell lysate at 30 µg

**Predicted band size**: 54 kDa

10% SDS Page
Immunohistochemical analysis of paraffin-embedded, formalin-fixed U373 xenograft tissue labeling Vimentin, using ab137321 at a 1/500 dilution.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors